METHODS OF DIAGNOSING NEUROPSYCHIATRIC

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TECH CENTER 1600/2900 CCAGGCTGGAGTTCAGTGGCATTAGCTCACTGAAGGCTCAAATTCCTGGGTTCAAGTGAGGCTCCCACCTCAGC HKIKAEKN 8 CCCATCAGGACTIGGGACTACAGGTAAATCCCTGACACGG ATG AAA ATT AAA GCA GAG AAA AAC EGPSRSWWQLHWGDIANNSG 28 GAA GOT OCT TOO AGA AGO TOG TOG CAA CIT CAC TOG GGA GAT-ATF GCA AAT AAC AGO GGG ·84 N M K P P L L V F I V C L L W L K D S H 48 ANC ATE ANG COG CCA CTC TTG GTG TTT ATT GTG TGT CTG CTG TGG TTG ANA GAC AGT CAC 144 C A P T H K D K T A I S E N L K S F S E 68 THE GCA COO ACT THE AME GAC AAA ACT OCT ATC ACT GAA AAC CTG AME ACT TIT TOT GAG 204 VGEIDADEEVKKALTGIKQH 88 GTG GGG GAG ATA GAT GCA GAT GAA GAG GTG AAG AAG GCT TTG ACT GGT ATT AAG CAA ATG 264 KIHHERKEHTHLHSTLKK 108 ANA ATC ATG ATG GAA AGA AAA GAG AAG GAA CAC ACC AAT CTA ATG AGC ACC CTG AAG AAA 324 CREEKQEALKLLHEVQEHLE 122 TOC ACA GAA GAA AAG CAG GAG GCC CTG AAA CTT CTG AAT GAA GTT CAA GAA CAT CTG GAG E E E R L C R E S L A D S H G E C R S C 148 GAA GAA GAA AGG CTA TGC CGG GAG TCT TTG GCA CAT TCC TGG GGT GAA TGC AGG TCT TGC LENNCHRIYTTCQPSWSSVK 168 CTG GAA AAT AAC TGC ATG AGA ATT TAT ACA ACC TGC CAA CCT AGC TGG TCC TCT GTG AAA 504 NKIERFFRKIYQFLFPFHED. 188 AAT ANG ATT GAA COG TIT TIC AGG ANG ATA TAT CAA TIT CIA TIT CCT TIC CAT GAA GAT 564 NEKDLPISEKLIEEDAQLT Q 208 AAT GAA AAA GAT CTC CCC ATC AGT GAA AAG CTC ATT GAG GAA GAT GCA CAA TTG ACC CAA 624 HEDVFSQLTVDVNSLFNRSF ATC GAG GAT GTG TTC AGC CAG TTG ACT GTG GAT GTG AAT TCT CTC TTT AAC AGG AGT TTT ·684 N V F R Q H Q Q E P D Q T F Q S H F I S ANC GTC TTC AGA CAG ATG CAG CAA GAG TTT GAC CAG ACT TTT CAA TCA CAT TTC ATA TCA TÖLTE PYFFPAFSKEPHTK 268 GAT ACA GAC CTA ACT GAG OCT TAC TTT TTT OCA GCT TTC TCT AAA GAG OCG ATG ACA AAA ADLEQC W D I P N F F Q L F C N F S 288 GCA GAT CIT GAG CAA TOT TGG GAC AIT COC AAC TTC TTC CAG CTG TIT TGT AAT TTC AGT V S I Y E S V S E T ITKHLKAIED 308 GTC TCT ATT TAT GAA AGT GTC AGT GAA ACA ATT ACT AAG ATG CTG AAG GCA ATA GAA GAT H G I KHLPG 328



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METHODS OF DIAGNOSING NEUROPSYCHIATRIC

**DISORDERS** 

TTA OCA AAA CAA GAC AAA OCT OCT GAC CAC GGA GGC CTG ATT TCA AAG ATG TTA CCT GGG 984 Q D R C L C G E L D Q N L S R C F R F CAG GAC AGA GGA CTG TGT GGG GAA CTT GAC CAG AAT TTG TCA AGA TGT TTC AAA TTT CAT 1044 EKCQKCQAHLSEDCPDVPAL 368 GAA AAA TGC CAA AAA TGT CAG GCT CAC CTA TCT GAA GAC TGT CCT GAT GTA CCT GCT CTG 1104 H T E L D E A I R L V N V S N Q Q Y G Q 388 CAC ACA GAA TTA GAC GAG GOG ATC AGG TTG GTC AAT QTA TOO AAT CAG CAG TAT GGC CAG 1164 Q M T R K H L E D T A Y L V E K M R 408 ATT CTC CAG ATG ACC CGG AAG CAC TTG GAG GAC ACC GCC TAT CTG/GTG GAG AAG ATG AGA .1224 WVSELANQAPETE I ĭ **428** COG CAA TIT COC TOG OTG TOT GAA CTG GOA AAC CAG GOO COA GAA ACA GAG ATC ATC TIT 1284 N S I Q V V P R I H E G N I S K Q D E T 448 ART TOR ATA CAG GTA GTT OCA AGG ATT CAT GAA GGA ART ATT TOO AAA CAA GAT GAA ACA 1344 SILPSSNFTL ĸ I PLE 468 ATG ATG ACA GAC TTA AGO ATT CTG OCT TOC TCT AAT TTC ACA CTC AAG ATC OCT CTT GAA 1404 ESAESSHFIGYVVAKALQHF 488 GAA NGT GCT GAG AGT TCT AAC TTC ATT GGC TAC GTA GTG GCA AAA GCT CTA CAG CAT TTT 1464 KEHFKT 496 AAG GAA CAT TIT AAA ACC TGG TAA 1468 TAATGCAATAAACACAGTTGCAGGAAAGTATGTTAGCTATATACTATGAAGTACTCTTAGTTTACTTTAGTTTGAATGGC

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GIACATTAGIAGTTCTTTGTATATTGAATAAATACTAAATCACCTA

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FIG. 1B



TECH CENTER 1600/2900 TGCGTCHCCTGCAGGGGGGGGGGGGGGGGTGGTTTGCAGGCTGGAGGTTGCTGACAGGCTGTGGGCTGGGGTGACTTC OCAGGCTGGAGTTCAGTGGCATGTTCATAGCTCACTGAAGCCTCAAATTCCTGGGTTCAAGTGACCCTACCTCAGC M R T W D Y S N S G N M K P P L L V F 19 COC ATG AGG ACC TGG GAC TAC AGT AAC AGG GGG AAC ATG AAG COG CCA CTC TTG GTG TTT I V C L L W L K D S H C A P T W K D K T 39 ATT OTG TGT CTG CTG TGG ANA GAC AGT CAC TGC GCA COC-ACT-TGG AAG GAC AAA ACT 117 A I S E N L K S F S E V G E I D A D E E 59 GCT ATC AGT GAA AAC CTG AAG AGT TIT TCT GAG OTG GGG GAG ATA GAT GCA GAT GAA GAG-177 V K K A L T G I K Q H K I H H E R K E K 79 OTG ANG ANG OCT TTG ACT OGT ATT ANG CAN ATG ANA ATC ATG ATG GAN AGA ANA GAG AMG 237 EHTNLHSTLKKCREEKQEAL 99 CAA CAC ACC AAT CTA ATG AGC ACC CTG AAG AAA TGC AGA GAA GAA AAG CAG GAG GCC CTG 297 NEVQEHLEEERLCRES 119 ANN CIT CTG ANT. GAA GIT CAN GAA CAT CTG GAG GAA GAA GAA AGG CTA TGC CGG GAG TCT 357 LADSHGECRSCLEHHCHRIY 139 TTG GCA CAT TCC TGG GGT GAA TGC AGG TCT TGC CTG GAA AAT AAC TGC ATG AGA ATT TAT 417 TTCQPSWSSVKNKIERFFRK 159 ACA ACC TOC CAA CCT AGC TGC TCT GTG AAA AAT AAG ATT GAA CGG TTT TTC AGG AAG 477 I Y Q F L F P F H E D N E K D L P 1 179 ATA TAT CAA TIT CTA TIT CCT TTC CAT GAA GAT AAT GAA AAA GAT CTC CCC ATC AGT GAA 537 K L I E E D A Q L T Q M E D V F S Q L T 199 AMS CTC ATT GAG GAA GAT GCA CAA TTG ACC CAA ATG GAG GAT GTG TTC AGC CAG TTG ACT **S97** V D V H S L F H R S F H V F R Q H Q Q E 219 OTG GAT GTG AAT TOT CTC TIT AAC AGG AGT TIT AAC OTC TTC AGA CAG ATG CAG CAA GAG 657 FDQTFQSHFISDTDLTEPYF 239 TIT GAC CAG ACT TIT CAA TOA CAT TITC ATA TOA GAT ACA GAC CIA ACT GAG COT TAC TIT 717 FPAFSKEPHTKADLEQCW<sub>D</sub>I 259 TIT OOK GOT TIC TOT AKA GAG OOG ATG ACK AKA GOA GAT OTT GAG CAK TOT TOG GAC ATT 777 PHFFQLFCNFSVSIYESV 279 CCC AAC TTC TTC CAG CTG TTT TGT AAT TTC AGT GTC TCT ATT TAT GAA AGT GTC AGT GAA 837 TITKHLKATEDLPKQDKA 299 ACA ATT ACT ANG ATG CTG ANG GCA ATA GAA GAT TTA CCA ARA CAA GAC AAA GCT CCT GAC 897 I S K M L P G Q D R G L C G L 315 CAC OCA GOC CTG ATT TOA AMG ATG TTA COT GOG CAG GAC AGA GGA CTG TGT GGG GAA CTT 957 R C E ĸ F Ε QKC H K C 335

Page 4 of 42

# TECH CENTER 1800/2900

476 **£**59 1377 1434 359 1077 379 1117 399 1197 **£19** 1257 £39 1317 R I Agg Att N I R TTAGCTATTAATACTCAAATTGAGTTAAAATGAAAATTGCTCCTTAAAAAATGAAACGTAALTAGTAATTACATTTCATG g व्य GAC CAG AAT TTG TCA AGA TGT TTC AAA TTT CAT GAA AAA TGC CAA AAA TGT CAG GCT CAC TIC AIT Taatocaataaacacagtiocaggaaagtatstaactaaataaagtactateatacttage ω <del>ξ</del>ξ g K Ľ 8 g X 25 Ħ ğ Z ¥ Д z Z S H H ğ 8 S TIT AM ACC > S H × > S g H CAG AOT ğ g > S ¥ 3 J ğ S z Š TH 8 ш ø a J G a ∢ ઇું F 9 H Ř ð 111 Ħ ø Ħ منا es s gar age ğ **K**GC TIT MG GAA ð ဥ 3 ¥ S Ħ 7 0 H M MAT H 8 × z Ħ G **Geacattageastestestatatatagaataataceaaasa** z H ð 3 g <u>د</u> گ Ш J 0 Ĺ H Į, MC 7 £ ğ Z 8 Z Ħ H M 4 U × ğ SE SE SA 8 TAT Z ø 4 Ω × H É H S Sec S 8 م کا کا E H Ш M Q CTC ANG धु g ð S. T. ~ ဗွ M 4 H ¥ ۵ > GIA GTG GCA ANA 8 g Z 8 XX 14 z ω Ø H ð ð F B PAT ğ 4 Д H S H U 35 g XX g ġ Ĺ ~ Z ZAT 8 \$ 8 g Щ Z > Q Ç ğ 8 Z ω S > A S O и

Appln No.: 09/722,544

DISORDERS

Applicant(s): Chen et al.

METHODS OF DIAGNOSING NEUROPSYCHIATRIC

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**ATTATGAGACACTCTCCCTGCTAATCCTTAGAACATCTTGGTTCTTGGTACTTTTGACTTTTAGCCCCTCTGACATATAGTTGATGTCAGA** 

ACATTITIAAGCTACTTATAGTCCTTGGAAATAGCAACAAATATCTTAGTTATTGGACTATTATAACCTTAGTCATCTTATTACTGCTTG

Appln No.: 09/722,544 Applicant(s): Chen et al.

Page 5 of 42 THOD'S OF DIAGNOSING NEUROPSYCHIATRIC

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**TECH CENTER 1600/2900** 



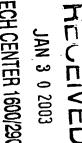
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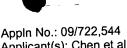
METHODS OF DIAGNOSING NEUROPSYCHIATRIC

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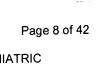
Applicant(s): Chen et al. DIAGNOSING NEUROPSYCHIATRIC METHODS OF

DISORDERS

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THATCCTITICTGGTGTAGTCTCCCTAAGTCTGTGTATGGTGTCTTGTAATTTGATTTGGAAAATTTCTCAGTCATTATTACTTC **AITHAITICCITICIGICIAACTGGGTGTTTGTACCCATTAACCAACCTGTCTTCATCCCCTCTACCCACATACCTTTCCCAGCCTTGGGT** CTGGTAGTCAATGGGGTGACAGTGTCGCAGCCAGATTGCCCTCACATCCCAACTCTTAGTGATCTTCTTAACATTTCTTGCAAGGCAG GGCCAGGAIGGICITCAGCCITCITAACTITITAAAGGAIAAITITCACGGGGAGAATICIAGGITAGIGIATITIYICITITCAATACITITA AATAITITCACICCACITITCITCITGCTTGTGTGGTTCTGAAGATAATGATAATITCITTATITCITGTTTTCTTGCAGGTAAGGTGGTTT **CATACCICIGGCITICITICGAGAAITITCICITITIGICITITGAITITCCIACAGITITGAATATGATATAATTATGATATAGACITIGGGGCTÄT** <u>AAATATITITCITTCCITTGTGTTTTTTAACTTGTGCCAACTTTTAATTGATACATAGTATTTTACATATTTATGGGGTACATGT</u> AGGTTCCAGCAGGGGACCACAGCTACTCGTATACCCTTGACCAAAGACTGGTCCTTGTCTATCAAGGATGGTCGTCTTCTTCCACCAAG CACACAGCTTCTGGAGGGACGCACATGGAGTGGTGAGGGAAGGGGACACCCGCCTAGCCAGCTAGATCAGCCAAGCAGAATAAACC TCTCCCTCTGTTGTCCAGGCTGGAGTGCAGTGGCCTGATCTTGGCTCACTGCAAACTCTGCCTCCCAGGTTCAAGTGATCCTCATTCCT CAGCCATCTGAGTAGCTGTGGTTACAGGCGTGTGCCACCATGCCTAGCTAAATTTTTGTATTTTTAGTAGAGACGAGGTTTTACCGTGTT TGCCTTTAITCCTTCTCTAATGCTGTTCTTTAAGTAGATGTGAATTTCTGAACTACATACTTTTTTCTTTTACTCTTTGAGAGGTTGTTTGG GGTIGGTCTICCTTGAGGGATGGTIGCTGTTCTGCATTCATCATTCATGAATGAGGGACCCTGCTATTGGGCTCATGTACAGCCCCCA TCTCTGCCACAATGAGCGCTCCATTCATGTTCCTATTGTGCCAACACTAGGGTGTCTGTAATCACTGAAAAAATTATTGCTATCATTAT IATTAITITITITITITITIGAGACAGAGTCTCGCTCTGTCGCCAAGGCTGGAGTGCAGTGGCACGATCTCAGCTCACTGCAACCTCTGCCT CCCGGCTTCAAGTGATTCTCCCCGCCTCAGCCTCCAGAGTAGCTGGGATTATAGGCATGCGCCACCACGCCTGGCTAATTTTGTATTTT TAGTAGAGACAGTCTTTTGCCATATTAGTCTGTCTGGTCTCGAACTCCTGACCTCAGGTGATCTGCCCGCCTTGGCCTTCCGGAGTGCT

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**ATAGIGITCCATIGITITATATAGACCACATITITACITITATCCATITIGITACATIGATGAACACIGAGGITGATCCATAICTIGGCIAITIG** 

Appln No.: 09/722,544 Applicant(s): Chen et al. METHODS OF DIAGNOSING NEUROPSYCHIATRIC DISORDERS ICTITITGA I GA AGICI GITI GIG I CCTITI G COCA CI GITITA I G CI CCTITITITITI I TI CI CI CI CI GGITA I CCCCCCCCCA CA L'ALIA I CA GACCITITITITAATIGICCCACAAITICITICAGITICITITITICATITICITITICATICITITICITATITICAGITITIGGAAGITITICIATI TGAATAGTGCTGCAATAAACATGGGGGTGCAGGTATCCCTTTAATATACCGATTTCTTTTCCTTTGGATAAATACCCAGTAATGGGAFT **GCTGGATCATGTGGTAGATGTATTTTAAGTTTTTTGAGAAACCTCCATACTCTTCCATCATGGCTGTATTAATTTACATTCCCATCAAT** GATATCTCATTGTGGTTTTGATTTGCATCTCCCTGATGAGTAGTGATGTCAAGCGTTTTTCCATATGCCCATTGGCCATTTGTATGTCT 

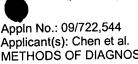
AAACAGGCCTTTAATATGAGGTTTTATGTTTATCTGGCTTGGAGTTAGGCTGTGTTTACTCTTTGCTGTAACTTTGGTGCCAGAGGCTA THY CITICGING THOCH CONTICGING THOCH CONTICGING THOCH CONTICGING CONTICGING CONTICGING THE CONTICGINAL CONTICGING CONTICGINAL CONTICCINAL CONTICGINAL CONTICCINAL ICITICITICITICCITICITICITICITICACCAGITICICACIA IGITICACACAGOCIAGO CAGA COCCIGO COLO CAGA TATOCICA G CTCAGCCTTTCAAGTAGGTGGGACAAATGCGCCATTCTATCATACCCAACAATTCCTCATTTCTGTTACAGTGGTTTTTTATTTTCTAGCA **ATCAGGCCTCAGTCTTTTAATAAGCCTGAGTACTTCCCTTTCCCTTTTCTGCATGTTAGAGTGGCCTGGAGTTGGGGGGTATCCATTACCC** CAGGITIGGTAGGCTTTGGTAAAACCACAGTCTATCAAGCTGTGGTAAAATAGTTTCCCTGCAGTCTGGCTTTGTTAAGGATAACAGAGA GTGGGGTTCCTGGAGGTAAAACTCAGGAAAGTGTGAGGGCCTCCACACAAAGGGTCTGCTGAAGTTTGTTCCATAGCCTCAGTTCTTA TCCITICCITICCITICCITICCITICCITICCITICCITICCITICCITICCITICCITITICITI ITITICITITIGA ITICITITICCI AGAGITITICCA ICITICICITIA CATACA CATITIGITICITICI CATATITITICCA CITITITICCA ITIAGGGCCI **AAAITITCCICIGGIGCCCIIGITITITGICICICCIGITAIGITITGIGITITCCACAGAGICICCGIGAATAIGGIGIGAGGCITGAAGIT** 

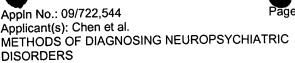
# FIG. 3D 0062/0001 BEINED TECH CENTER 1600/2900



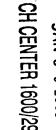
**TECH CENTER 1600/2900** 





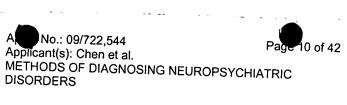


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CH CENTER 1600/2900

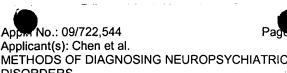






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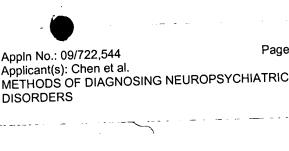
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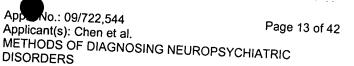
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DISORDERS

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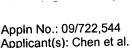
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**DISORDERS** 

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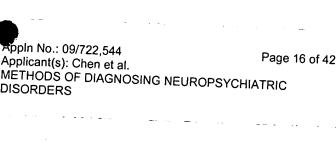
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Appln No.: 09/722,544 Applicant(s): Chen et al. METHODS OF DIAGNOSING NEUROPSYCHIATRIC DISORDERS

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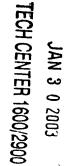




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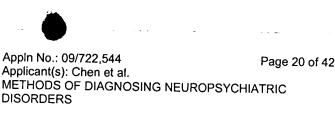


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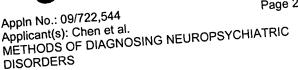




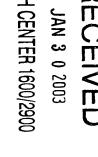
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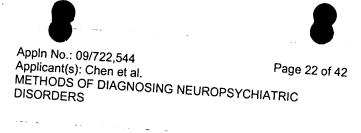
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Appln No.: 09/722,544 Applicant(s): Chen et al.

METHODS OF DIAGNOSING NEUROPSYCHIATRIC

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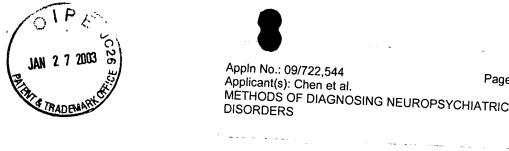


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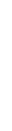


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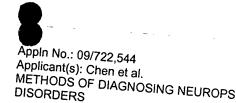


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### CTTAAAAGIGGAAGAAGAGGCAGAAAAAAAATTAATAGTAGCAGCCACAAGAGAAAGGACTTGGCTCGACTTTGACGACCTTGAAGACAG TGGGAGAGTAGATGATTTAGCTCAGTGACTGCACTGGAAGTAGCTCCCTGGAAGGTTCTGAGGTTCTGAGGTTCTAGAGGCTAGACTAAGCGAG AGTGATTCTCCTGCCTCAGCCTCCGGAGTAGCTGTGATTACAGGCACTCACCATCACCTGGCTAATTTTTGTATTTTGAGTAGAGGC **AGGGTTTCGCCATGTTGTCCAGGCTGGTCTCGAACTTCTGACCTCAAATGATCCGCCCCACCTCGGCCTCCCAAAGTGCTGGGAFTACA**G GCATGAGCCATCATGCCCGGCCTCAACTGATTTTAAAATAGAGAGTATGCTGGATTATCCAGATGGATTCAATGTAATCACAGGGTC AGGAAGGGGCCAGGAGCCGAGTAATGTAGGTGGCCTCGAGGAACTGGAAATGGTATAGAAATGAATTCTCCTCTAGAGCCTCCGCAAAA GGTGCGATCTTGGCTCAGTACAACCTCCGCCTCCTAGGTTCAAGCGATTCTTGCCTCAGCCACCTGAGTAGCTGGGACTACAGGCAC GTGATGGATTGTGCTGTGCCTGCAGGATGGGGAATTAGTGTCATATGGGCCTAGAATTTGTCATCCTTGGTGTACATACCAGGTATTAA TCTAGATGCTAGAGATAAAATGATGATTATGACACAGGCCTCTGACTTCCAGGAGCTCAGTCCAGAGAAAGGAAAACAGATTAGTGAACA ATTITITIGAGACAGAGTCTTGCTCTGTCACCCAGGCTGGAGTGCAGTGGAATGATCTTGGCTCACTGCAACCTCCACCTCCAGGGTTTTA GTGCCACCACGCCCAGCTAAITITITGCAITITITITITITITITITAGACAGATGACAICTTGAITITIAGCCTAGGGAGACCCACTTCAGACT TCTGACCTAAAAGACCAAACAATAATGAATTTGTGCTGTTTTCAAGCCACTGAATCTGTGGTAGCTGTAGCAGAGCTAATAATAGTA GTTGAGTATAGGTTCATTTTGTTCTCATATTTCTTTCCTACCTTGGTCTTTCTGGACCTCAGTTCCTGAATCTGTTGAAAGCGAATAGG attacatcaccatattgtgggtaaaatggcagaaggtatggaagaatgaaagattaaaatggcaagaccaagtcccttcaa



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<u>ŤĀCĀĞĞĞÇAAĀGAAĞAĞĞĞTĞÇAĞĞAAAGCAĞÇTĞĞĞAĞAAÇTĞAÇTTTÇTĞĞTÇAÇÇAAAĞĞĞĞĞATĞĞÇTTÇAÇATĞÇÇATTÇT</u> atcaaacagtgcttcactgtttttaaactatggacttttgcaatttatctcaaaataaaacgtttcatttttaaatgctgaggatttaaa atgacagaaaatcatcaggttgtaaattagtaatacatgtttgctaatgtctaaagacactctattgggaaccgccaattttctgttggata gactitctctataacacatttttatatatggattgttaattctcctaggggaaaaacttctcaaaactttggctttagatattttcct TGTGTGTGTGTATATACATATATGTGAAATGCAAAAAAAGAATAGTAATAAAAAAACCACCTATCACCCACTTTAAGAAACAGACA

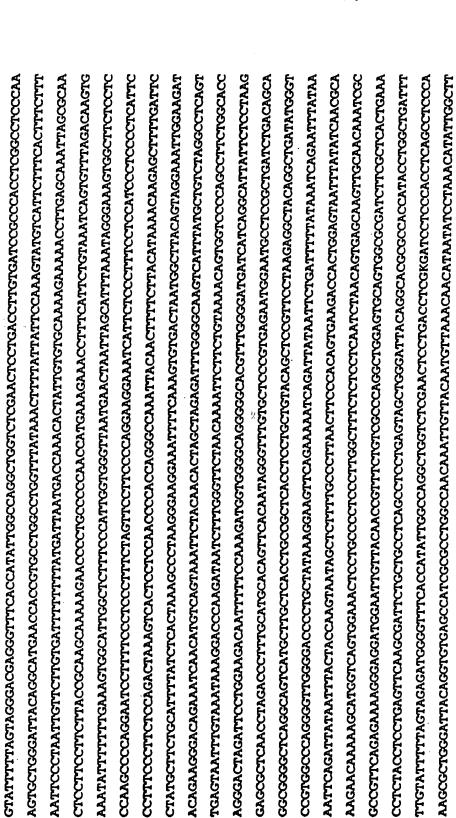
Page 29 of 42 THODS OF DIAGNOSING NEUROPSYCHIATRIC



### **TCCCCTATTGGCTAGGGTTAGACCGCACAGGCTAGACTAATTCCCATTGGCTAATTTAAAGAGAGTGACGAGGTGAGTGGTCTGGAGG** GCGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGCGGGTGGATCATTTGAGGTCAGGAGTTCAAGAAACCGGCCTGGAC AACATGGCGCAACCCCATCTCTACTAAAAGTACAAAGATTAGCTGGGCTTGGTGGCTCTCACCTGTAATCCCAGCTACTTGGGAGCCTG TCCACTTCTTCAAAGTGCAAACTCTTATGACACTAACGTGTAAATGTTATGTTCCCTGTAGCTCCTGACCACGGAGGCCTGATTTCAAA gatgttacctgggcaggacagactgtgtggggaacttgaccagaatttgtcaagatgttcaaatttccaaatttccaaat **AGATGGAGCAATGGTGAGGGTGCACTTGCCAAGGGGGAAGGGGTTCTTAACCCTGACAATGCACGTGGCCCCTGCTGCTGTGTGGT** aaaaatggitatgacagagcatgtaatcggaatgaatcagggcggagcctrataatcggaatgaatcagggcggagcatgtaatcggaat <u> AAGTGGTTCACAATCACCTATTTACTTAATCCTATTGACATCAGAAATACTAATGATATAAGACAAATGATTTTTAAAGTAATCAAATA</u> GTGCAATTITIAATAGCTGTTCAGTYGTCCCAGGAAATTATTGCACCAACGTGCATTTCTGTGTCTAAATATATAGGAAAAAGGGCCAGGG TATAAAAGAACAAAATAAAATGAAAGCTGCCCTCTCCTACCTTATCAACTCCCTCTTCTAAAAGATAGTTATTAATAATTCTTCATGACT CCTCCTAGAAAATAAAATTACATGCATTAATATATGTGTGTATATACTACTACTAATAAATTTCTAGTAATGAGATTCTTGGATTCAAGAGT

RECEIVED





ACTGGTGTTTTTGTTTTGTTTTATGAGACAGAGTCTTGCTCTGTTGCCCAGGCTGGNGTGGCACAATCTCGGCTCACTGCAACCTCC ACCTCTCGGGTTCAAGCAATTCTCCTGCCTCAGCCTGCCAAGTAGCTGGGATTACAGGCATGTGCCCACCACGCCCGGCTAATTTTTTT

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DISORDERS

gaatcagggtggagcgtgtaatcgaaaaaggttgctttacgaggaaattaagtttaaaagtagaaggcaaagaattgaacatactgaca TACTGATTCTTTGGAAAGAAATTTAGAACTCACATCTAACAATTTTTTAGGGTTTCTTTAGTATTCTGGACAGAGGACAAAATCTCATT METHODS OF DIAGNOSING NEUROPSYCHIATRIC





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METHODS OF DIAGNOSING NEUROPSYCHIATRIC
DISORDERS

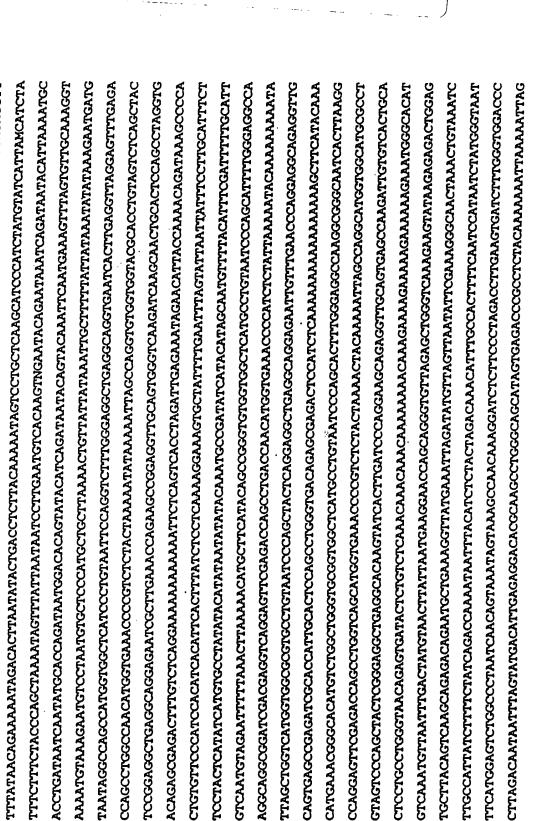


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### FIG. 3AA

aagttgaaccattgtaaattggggaccatatgtacatgtatgcatatatgatattaaaaattattagacgtctttaaaaatttgacttt TAACATATTACTTTTATTTAATCACCTTGCTCAAGGAGCCTGTAAATTACATATTAATATTCTCCATTATGAAATAAGTCTTTCCATTG TTTTGTTTTGTTTTYGTTTTTGTTTTTTTTTTTTGAGACGGAGTCTTGCTCCGTNGCCCAGGCTGGAGGGCAGTGGCAATCTTGGC TTAAATAAAAAAATGAGTTTAATAGAGTCTATTAAATTAGATCATTATTCGGAGTGGTTAGTAAACCTGTTTAGAGTCGACAACACTC GCAACCTCCACTTCCCAGGTTCAAGTGATTCTCCTGCCTCAGCCTCTGGAGTAGCTGGGATTACAGGCAACCGCCACCATGCCCAGCTA **CCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCATGCCCAGCCCCTTTCTCTCCTTTTTAAATATCACCAGCCTGGGTTCTTTGTTCT** CGGCCTCCCAAAGTCCTGGGATTACAGGCTTGAGCCACCATCCCTGGCCTCCAGCCTGGGTTCTTATTGACACTGAATTCTCAAGTTAG GCCTCTCCCGACCTCAGTAGTTGGTCTTTTCTCCCCCTTCTTTTGAAAGCAGAGTCCATTATACAAATGGACTTGTTTACTTCTCCACA TCCCTCTTGTGCAAATTTTCTGCCATGGACACCCTCTACCCCACCTTAGAATGTATATTAGACAATTTTGACATCTAGAATGTCTTGTTG GGCAGAAAAGCGTTTGGAAAGCGTTGCTCCAGGTAGCTCTGATTACAAACTGGACCTTTTCGCGGGGTTACCTAGAGCAGTTGAGAGTG GCTACTCAGGAGGCTGAGGCAAGAGAATTGCTTGAACCTGGGAGGCAGGTTGCAGTGAGCTGAGATCAAGCCTCCAGCCTGGGCCTC AACTGCTGACTCGAGGACTCTCTCAGCCTGTTTTATCATTTGGAAGAGGAAATAATATATCTGCTTCGTACACATCTTTAGAAGTTTAA GGCTAAATTTTTGTATTTTTAGTAGAGGGGGTTTCACCGTGTTAGCCAGGATGGTCTCGATCCTGGACCTTGTGATCCACCTGCCC CTCTTTCTCCTGGCCAGGTGCAGTTGCTCATGGCTGTAATCCCAGCACTCTGGAAGGCCGAGGCGGGGGGGATCACCTGCGGTCAGGAGT ttgagaccagcctggccaacatggcgaaaccccgttctactaaaaatacaaaattagccagatatggtgtgtatgaacctgtaatccca





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CCGGCCATGGTGGTGTGAGCCTGTAGTCCTAGCTACTCAGGAGGCTAAAGGTGGAAATACCACTTGAGCCCCGGGAGTTCGAGGCTGTAGT aaaggaaatgcagccatttttttttccaagttctggataattttcttta GTATGTTGGTCTATGTAGGCATATCACAATWTATYCATTCCCTAGCTGAAGTACATTTGCTTTCAAGGTATTGCTATTATAAACAAATC TCATACCTTTAATCAAATAATATTTTGTCTCTTCAATCAGCTNTGATTTACTTTGTTCNAANACNAAGCACACAACTATAATTANAAT ttcattactgataaatataaaatattttccaaaacatcacaaatcttttninnincactatttactatacactttinggtcinaatttaa AGCGGCTTCACTATATGTGGTTCTTTTCCTCTTCCCATACTAATTACTGGTACTGGACATATACATCCAAAATCAAATAGTARTGTC

### FIG. 3CC

GATTTAACGTAGTTCATGGTCTTTAGAAAACAAGAAAGTCCATAAAGAAAATCAATTTAAAACACAAAATACTTTCTAATCTAGAAATG GCTCTGTAAATTATAGCTCTTATTAGTTGCTGACACAATAAAGCCACTGAGTTATCTTGAGAATTAAACATTTATATATGTTACTCGTCAC TGACACAGATGTAGACGATATTAATAATTACTCCAGAACAACAGGCATAACTAAAAACTACCACAGGCAAAAGGGGGAAAATAGAGAAATG **Cagaracagartcatctttaattcaatacag**gtaaaggagacccaagagggggagtacggaaatgacaggcataccttgatttcac TGTTAATTTACTTATGAATTGTGTCTGAATTTGAAAACAAGCTGTAGGAGGTATTCATATTTCCATTGTGATTGCCTTCAGGCTGACTT CAAATAAAGCAATTTGAGTTCAAAATTTGACTCTGAAACTTACCAGCTGAGTAAGCTTGGGAAAGTACCTCAACCATTCTAGGCCTCAG TGTTCCACCTGTAAAATGGTAACAATCATAGCTATCTTAACGTGTACACCTATAAAGTGATTAGTATAGATTTCTTATACAAAACAAGA GGCATGTGGAATTTATAACAAAAGTTCTGTCTCCAGCCCAGTTTCTGTTACATAAAACCATATAATTAACAGTTAAACTGGATCTGGTT TAAGGGCTGGGACTTAAGCCCATGTTGCCCACCTCCAAGTTTCATGGACTTTTTCCTTCTCCACATTACTTTCTTCTTCTGCTAGACTGT **CCTGATGTACCTGCTCTGCACACAGAATTAGACGAGGCGATCAGGTTGGTCAATGTATCCAATCAGCAGTATGGCCAGATTCTCCAGAT** GACCCGGAAGCACTTGGAGGACACCGCCTATCTGGTGGAGAAGATGAGAGGGCAATTTGGCTGGGTGTCTGAACTGGCAAACCAGGCCC



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**DISORDERS** CTACAAATGCGCCAGGCTAGTGATTCCTGATGAGGCTGGTTTTGAGGGTTCCCAAAAAGACTTGGATACAAAATTACTGGGCAGAGAGA ATTGAAGATGCAATATTCTGTGTGTATGTTAGGTTATGTTGGTGCCCTATCCAGATCCCTGGGGATCCCTTTTACCAGCTCCCACT GGTGCTGGTGCTGCTGAACTGCTTATCTCTGAAACTTTCTCCCAAAGATTGCCCTTGGAGCACTTATGCCCCAGAGCTTCCTGCAGG ATCAGGCTGAGGCTAACAGTCATCTGAAGCCATATCCTTGCTTAGCTTCTTTCACTTCTAGTTTGCTTTCCTCATCCCCTTAAAAGT TGCACCTGAGAGCATTCTTTATAAACCACTTCTGTCAGAATCTCAGGCACTGCTTCTAGGAAATTAGACTTATGGCATTCTATAATCCA GCATTTCCCTCTTTTTCAAACTACAAAGCTGTGGATCATGCCTGATTTGAGAAATAAGTTTAGAAAGTCACAGCAAGCTCATTAAAAA AGTGTATTCATTACTGCAGACCACAGTCAAAGGGTTTTGAAAGCCACTGTTCCAATCCCTGCCAGCTCTGGATTCTATAACTCTATTA GATTACACTTGAGGAAGGTAAAATAATTCAATATTTTGATCATCCTCGCATATATAGACTTTTAGTTTAACGAGGAAAAAGTCTTGTA TTGAAGAATAAAACTTGAAGAAAATTTTAGCAGTGCTTTCAACCTTTAGAAATCTACAGTCAATATTTAGTTGTTTTTACCATTGTC GTATTITYCTATTCTGTGCTTTGATTTACTTCCATTCTAGTGTCTCTTGAGTAACATAACAGATTTATCTAAAATTCTTTATGCTGATAA CATITIACTIGGGTGTCAGGCAATGTTCTAAGACTTTTTCCATATATCAGATCATTTAATACCCTCAATGACCCTATAAGGGAAGTAGAAT TCTTTCCCCAGTTTTTCAAATGAGGCACAGAGGGTTAAGCAACTTGTCTGAGCTCACACAGCTAGTAAATGGTAGAACTAGAATTCA **AACTCAAGCAGTATTTCTCTAGAATCAGTGAACGTAACCACTTTGCTAAACTGCCTGTGAAGTTACTTTTTCTCAAAACAGCTCCTATTT ACGGTTGTGGTCCCTGGTTGTATAGTTACATGGGTGTTGACTTTACAATTATTTTAAACCAAACATAAATACTTTATGCAGTTTTTA** TGTATGTTATACTCACAGAAAGAGAAAAAATTTTTAAATCATTCTTTAAGGTTACATCAAGTTGCGTATCAGTTTCAGTTTCAGTTTCAGTTTCAGTTT TTGATTCTTGCCAAAATCACACCTACAACCATAAATTGTAAATTTCTAGGAAAACTCAGTACAAAACTTGGTGCAATGCAATAAAGTTT



**GGAGTITIGAGACCAGCCTGGCTAATGTGGGCGAAACCCCGTCTCTACCAAAAAATAAAAATTAGCCAAGTGTGATGGCACACCTTGT** AATCCCAGCTACTCAGGAGGCTGAGGCAGGAGAATCACTTGAACCCGGAAGGCAGAGGTTGCAGTGAGCTGAGATCGTGCCACTGCACT Appln No.: 09/722,544

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GTGGCACAGACAGTAATACTCAGCAAACATCCCACCTCCTCTCATATTTTCCAGCTCCCCTTGTGGTTAAACGTTGCCATGTGGCAA

TTTCTGCTGAGGGCACAAAGAAAGTCCTGAAATCATGTGCTACAGCTATGAGATAATGTGCCTTTGCCTACCAGGCTTCTCAGTGTTTA 

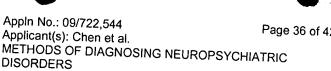
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ataateettettetetag<mark>stagttecaaggafteatgaagaaat</mark>te<mark>tteeaaaa</mark>caaaeaagaaagaagaagaatet

### agcaittiaaggaacaittiaaaacciggtaagcagagtgcctggttaggaatgccttgttgacaggaatagttaattctcaaaaggga aaaacaaaacitgittcaaaatacctggaaaacatgittaacctcaitaataagacatgaaaacaaagatggcatitttggccta TCAGATTTGCAAATTAAAAAAAACCCAGGAAATCCTGATAGGAATGTGATGAAATGGGAATTCTCATATATCATGTTATTGGTGGGAAC ataattggitttgcatttttgaaagctatttgattatgcatatgaaggccataaaatttccttttgatataataattccactccgaa atcaatcctaaggrataaatctaaatttgatgaamaktctccctccaagatctagatttgcagcattattaaatattaaaagttggcc GGGCGCAGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCTGAGGCGGGGGGGATCACGAGGTCAGGAGATTGAGACCATCCTGGAT AACACGGAGAAACTGCGTCTCTACTAAAATAAAAAATTAGCCGGGCATGGTGGCGGGGCGCCTGTAGTCCCAGCTACTCGGGAGGCTG AGGCAGGAGAATGGCGTGAACCCGGGAGGCAGARCTTGCAGTGAGCAGAGATCGCGCCCACTGCACTCCAGCCTGGGCGACAGGAAGA tgtgtaaaaacaagaatgattaagtakattatgactaaatacactcaatacattttatgaaacgttaaaaatattcaaaaattttaa ataatgacttgctaactatattaacaagactttattattagctagtttggaggtaatagtattatcatgattttcagaaaaaagatc TCACACTGCACGGCTTCCTGTTAAGATATTTGCTCAAAAATGCGAGATATAAAAATCTGGGTAATATGATCAACCTTAAAGAATAATT ACATTITAAATTATACATGAGACCTTGTTAGTAGGTCACCATCAATGTGTAATTAAGCCAGATGTGACAGGATTTGTTGCCTCTCCCTT







GGAACTGGTACTCTGAAAGAGAAAATGAGAAATTTGACAAGATCCTGTCCCCAAGGAGCTTCCTATCCAACAGGGGCACAAGACAGATA **AGAATCAAAGTGTATAGGTTGGAGAGAGACTGTTCCAAAAGGGGGGATGGCATGGGCAAATACGGCAAGAAAAAGAGTAGAGCATCTAGG** TACTGAGGGTGCTGGGAAGTCCTGCTAAAATACGGCAAGAAGAGTAGAGCATCTAGGTACTGAGGGTGCTGGGAAGTCCTGCTAAAG ACTICITICAGGGGCAATATACCCICITICIACCCATAAACTAGGGGCAACATACCCICICICCCCTTTCACACATGACCATAACACCATG aaattaattaataaacacgtgtaaatgaatatcagtagactacaacaagagtaachgtagcgaaggtggaaggcaaaggtgggaaga GTCAGGGCTCTGAGTGCTGGGGTGTGGAGTTCACTCTACAGCTGCGCTGAGACACGATAGGTTTTAGAGAAAGGAAGCCTCA CTCTGGGAGTTCAGGGGAGGGTCGTTCACATTCTGGTAGGGAAGATACTTCTGAGCTCAGTATATTCCCCTTTCTCACTGTCCTTTCTATC TGGTCCCCTCCCACTGTGGGGCCTTTGAGTTTCCCTGTGCCAGGGTACCTGCCCTCTGTGAGTTTGAGTTCTJTCTTTGGTTGCAAGCA ACCAAGACCAGCTCAGCTAAAAGAAATGGATGGATACCGACTCATGAGTCAGAGGGGGAAGCTGGACGTCTATGCCCAGAGCCAGGCAGA GGAGAGAGAGAGTCTTGGTTGACAGTCCCCATGTAGTACCCCTTTGTTTAGGTTACTGAGTCATCAACAGATCTCAGTTCAAATAGTC TAGCACTCAACTCTTGTAAGTTGACATTTACCCATGTGACTCTTTATGAACGTTCATCTCCATCCCGAGACCTACAGTCCATGAGGGTA CCACCGTTCTAGGGTTTTTGCTCTTTCTCTTTTGTCAGTGGGGACTTAGGACTCTGCCTGGCACAGGGCAAACCCTCAATATTTGTTGAAT acticcaatggcaatgagaattaagatactgagtaattgggagatcaagcaaattattactaacaaggcacacgaagtgattititcac TTTTTTTTTTGAGACAGAGTCTTGTTCTCACCCATACTGGAGTACAGTGGCACGATCTCGGCTCACTGCAACCTCGGCCTCCAGGT **AACGGGTCAGGTCTAGAGTCTGGGAGGAGGAAACCGATGGACAGCTGCTTCAGGGCCCCAGCGCTCAGGGTGAAGCAGCTGCAGTTGTTT** aggcaatgttaatgttttttttttttatgtttttaaaattctaaaattaaaat TATCCATAATCCCACCATCTTAACACAACCACTATTATCATTTGTTTTCCTTATTCACATTTTCTACCTATTTTCTTAGATTYCCAAGA



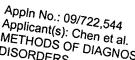


gtaataaatgaaaattiyttatcttattataattiyttatggtttiyttattattattggagaataaacattiyccaagtttgtttactg

ACTGAATTTCTTTTTTGTGCACCTTACTTGGTATCATGGATAAAATTTTGTCAATTTTTCTGATTATATCAATGCATTCAGGGTCCCAAA CCTGCCAAAGTTTAAAGAGAAAGATACTAAGGGAAAAACCAGGAAAAGATGGTAGAAAAGAATCACCCTGGCATTTTCAATCACGTAAA TCTGGAACTTTCTTCTAGTTATCTAGCATCCTAAGTGCCTGGACGTTCCTGATTGGTTTGCAATGTGTTTTATTTCCCATCCCAAGTT TCATAGCTGCCGGCCCTGGGATCTACAGTCACAGGCTGTAACACAATATCTTGCACATCCTGAGTCTTTAATAAGCTTTTTGTAGATGGG

CATITIGCTAGGIGCCCTAGCTGCAGGTATACAGCTCACTGAAACATGAATTCCAATITITATAGGGTGAAATATATATTTAGAACCCTCT

GGCATGATCTCGGCTCACGGCAACCTCCCACCTCCCAGGTTCAAGCGACTCTCATGCCTCAGGCTCCCAAGTAGCTGGGATTACAGGTGT GCACCACCACACTTGGCTAATTTTTGTATTTTTAGTAGATGTGTTTTTACCATGTTGGCCGGGCTGGTCTCAAACTCCTGGCCTCA AGTGATCCTTCCACCTCAGCCTCCCCAAGGGCTGGTATTACAGGCATGAGCCACTGCCTGGCCTGGCATTTCAATTTTTAAAATCTTCA



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### FIG. 3GG

ctcittaccatcatcatcgtgaaaggcaaatatacaaaatttgttgactaatgtaatgagtcatgagtaacagaagtttactgacca aacactacgtgcatgtagagttcagaataaacactttattatcacatgagaaaagaccatcttagaggctcaacaacccaggaaag CTGTGACGATTTCTTCAAATTGTTAAGAATATCCATGCATATGGGTTTCACATTATTTTGCTACACACAGTACCAATTTTTCCAAAAGC ttgctgctttttttttttttaaggtaagatctaatgcatcctatatccagtaaataatgcata ttttgtaaagaccaataggttctgtatagtctttttttaaattgtggtaaaatacacatggcattaàtttaccattttaa GAAACTCTGTACTCGTTAAGCACTCACTTCCCGTTTCCCCATCCCCCAGCCCGTAGCAACCACGACTGTACTTTCTATGAATTTGACTA ttgaatggcttagctattaatactcaaattgagttaaaatgaaaattcctccttaaaaatcaaacgtaatagtaltacatgg AGTGCACAATTTGTGGCATTAAGTACACTCACGTTGCTGTGCAACCATCACCACCGTCCATCTTCAGAACCTTTTTATCTTCCTAAACT





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ATGGACACTTGGGTTGCTTCCATCTTTTGGCTATTGTGAATAATGCTGTTTTTGAACGTGGGTGTGCTACATAGTTACTTTTTAAAATTG GCACAACAGCGCTGTCTTTTGACATACGTATTTTATGGAAAACACAAGATTTTCCTGGCTGACGCTCAACCTCATAATTTGGACCTTGG TCTGTCGCCCAGGCTGGAGTGCAGTGGTGCAATCACAGTGTCCTTTTTGTGACTGGTTTTATTTCACTTAGTGCCATGTTTTCAAGGTTCA TCCATGTTGTTGCATGTCTCAGAACTTCCTTTTTAGGCTAATATTCTTGCATGTATTTACCTAGTTTTGCTTATCCATTCCATTCAGCCATTG CGAAACCAGCCTGGCCAACATGGTGAAAACCTGTATCTAAAAATACAAAATTGGCCAGGTGTGGTGGCGATGCCATGCCTGTAATCCCA GCTACTCAGGAGGCTGAGATGGGAGAATTGCTTGAACCTGGGAGGCAGAGGTTGCACTGAGCCAAGATTGTGCCACTGTACTCCAGCCT TTAAAGAACTTTTCACCCAGTCTTGATCTATCTGACAGAAAGGCTTGTCAGAGAAAGTTAGAGTTCAGAGGCAGCCAATTGAATATAAT TACTCTATTGCCCAGGCTGGAGTGCAGTGGCATGATCTGGGCTCACTGAAGCCTGACCTCCTTGGCTCAGGTGATCCTCCCACCTCAGC CTGGTCTCAAACTCCCAGGCTCAAGCAATCTGCCCGCCTCAGCCTCCAAAAGTGCTGTAATTACAGGCATGAGCCACTGCTCCTGGCAG GGAACTAATAGAATCCTGGGTTCTTCGGTGTGCAATAAAYCTCAAATACAGCTATTCAACCATAGATTTTAAATATTTTGFTAGTGAAGG GGCTCAAAACAGCTAAATGGAAAGAAGATTTTGCATGCAGGCTGAACTGGATTTTTCATCCTGGCTACTATATTCTCCAGATGTGTCACT attgitciaittiaitattattattgitaitgitcatcictaccigigactaatttaigaattcaacittaicataggtatgiaggtata GAAAAAAAACATGGTATGTATAAGGTTCAGTACTATCTGCAGTTTCAGACATCCCCTTGGGGTCTTGGAACATATCCCCCGTGGATAASG TTGGCCAAGATCCTTAATCTCAGTGTCATCTATAAGGTAATTAAAGTACACTAGTGCCCCCACTAATCTGTGGTTTTTGCTTTCCAAGCTT TCAGTTACCCGAGATCAACTGCGGTTTTAAAATATTATGTGGAAAATTCCAGAAATACATAGTAAGTTTTCAATTGCATGCCATTAAAT CTCATGCTGTCCCTGACCCCTTCCTCCGGAGGTGAATGCTCCCTTTGTCCAGTGGCTCCACGATGACTACATTCCCCCAAATTGTTCT GGAAACTACTGTAAAAGTTTGTSTTTTATAGAGTAGTTSTSAGAACTACATTAATCCATAATGTGTGSCTCATGATACTCATTGATAGA

RECEIVED



**TCCAATAAGTTAACGTATCCACTAATAATTATTATTTCTTCCTAGAACAAGACAGGATTAAGCATCATGACCGTCCCTATTGGGGGATG** TCTTCCCAGTATTCAGGTCTCAGCTCAAATGTGACTTCCTCAATGAGGCCTCCTGGTGATCAGGATCTAAAGCACCCTCTAAATCAC TGTTTAGTGCTATACCCATTAATTTACTATCATCACTTTGTCACTATCTGCAGATGTCTTGTTTGGTTACTTTTGTNGTGTTTTGTCTCAC TGCCAGAATATCAGTTCTATGAAGAAAAGGGCCTTGTCTATTTTGACACTTATAGANATGATGNAGGNACGACATACAAATGGCCAATG GCCATATGGAAAAACGCTTGACTTCAAGAGTACTNATGGNTATNACCAACATTTATGGAGTAACTACTTTGAAAAGAACCATTCTGTCT TTACTATCAAGCCAAGATACTCAAGGAAGGCAGCAGCAGAAGTGGAAGCTCCATGTGGGCAGAGGCCTAGTCTTGAGATGTGATTTAAGCT GGTATTTGGGTGAAACAAATAAACCAGCCTCAAAATAACACAAGGGGCCGGGTGCAGTGGCTCACGCCTGTATCCCAGCACTTTGGGAG Tatactacaaaititctatgactactaaacatataaaagtaaaattittaaacaaatatatctcttaatgagaaggaagctttttatac CAAGTTTTTCTTTAACAATGAGAAATTTTATCTCATTACATTTTCTCCCTAAACTCTTATTTTCAATCTACATTCTAAGAATTTTATCC taatgtagtatattttttatgcttaaatatcttttgttgatcaacacaatttttgatcatttttaaatttaaaaattaagaacatcctgt gacatcaaattctaggtatgaaatattttattctagattgggtgatcattataaattattttttgtacataattgatcaaaataacataaa TITITIATAGATGCAAGCACTGTGGCACCTACTGGTATAAATGCACCTGCTGATTGGAATGTTCTTTCCCCCAGATCTTCCCCAGATCTTCCCCAGATCTTCCCC GCTCGAGGCAGGCAGATTACTTCAGGTGAGGAGTTCGAGACCAGCCTGGCTAACATGGTGAACCTCCAT

attagcaggtcatccctctttaaaatgtaccaaatggaatctaaatatcatcgcaatttgacccagcatcatccatttaaacaaatata

TGGTAGTAGCAACAATAAAAATAATATTATCAAGTAACTGATTCATAATTGACTCTCAAAAACGTTAATTTTCTGCTTTACCTTTACCT AAGTTTACCTACATGTTTGAATTTGTAAAGGGAAGGTTTTTTCTAGACCAATAATTTTTCAAATATTTTTTGCTCTCATACTTCCTCAAAGG



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# HKNG 1mRNA EXPRESSION IN NORMAL BRAIN

					-		-				_																		
OLIGODENDROCYTES	1	•	•	ı		1	•	ΥZ	•	1	•	1	1		•			•	-	•	•	•			,			•	
ASTROCYTES	•	•	•	•		,	•	A V	•	•	•	,	•		•	•			•	•		•	•	•	•			•	
NEURON	‡	‡	‡	‡		‡	‡	N A	‡	: <b>+</b>	‡	: ‡	-/+	:	+		-/+	; +	- 4	ŀ	‡	; <b>+</b>	+	- 4	- 4	•	+	‡	•
WHITE MATTER	•	•	1			•	•	NA		•	1	•	•			•	•		1	•		•		•	•		•	•	
GRAY MATTER	+ ;	<b>+</b> <b>+</b> <b>+</b>	‡	‡		‡	‡	AN	‡	‡	‡	‡	-/+	:	+	+	-/+	: ‡	: 1	ţ.	‡	+	+	+	- +	-	+	‡	
BRAIN REGIONS	MOTOR COLLEX (1)	MOTOR CORTEX (2)	PARIETAL CORTEX (3)	OCCIPITAL CORTEX (4)	HIPPOCAMPAL FORMATION (5)	CA1	. CA2	CA3	CA4	DENTATE GYRUS	SUBICULUM	PARAHIPPOCAMPAL GYRI	CAUDATE/PUTAMEN (6)	GPI/GPe/PUTAMEN (7)	GP.	GPe	PUTAMEN	AMYGDALA (8)	THAI AMIS (9) MEDIAI	SUBSTANTIA NIGRA I EVEL (10)	SNc (SUBSTANTIA NIGRA PARS COMPACTA)	SNr (SUBSTANTIA NIGRA PARS RETICULATA	RED NUCLEUS	3rd CRANIAL NERVE NUCLEI	SUPERIOR COLLICULUS	UPPER PONS (11)	LOCUS CERUFEUS	PONTINE NUCLEI	LOWER PONS (12)

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DISORDERS

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**ASTROCYTES** 

NEURON

WHITE MATTER

GRAY MATTER

BRAIN REGIONS LOCUS CERUTLEUS PONTINE NUCLEI RAPHY NUCLEUS (MIDLINE)

INFERIOR OLIVERY NUCLEUS 12th CRANIAL NERVE NUCLEI

HKNG 1mRNA EXPRESSION IN NORMAL BRAIN

(MULTIPOLAR LOWER MOTOR NEURONS

PURKINIE CELLS GRANULAR LAYER MOLECULAR LAYER

CEREBELLUM (14)

NUCLEUS AMBIGUUS

EMPERAL POLE (15)

CINGULATE CORTEX

‡

ANTERIOR THALAMUS

SUBTHALAMIC NUCLEUS

VENTRAL

ANTERIOR N. (VA), VENTRAL LATERAL N.(VL) HIPPOCAMPAL FORMATION (18)

SUBICULUM CA2 CA3 CA4

CERVICAL CORD (ROSTRAL POSITION)

PARAHIPPOCAMPAL GYRI

‡ ‡

ANTERIOR MOTOR NUCLEI SENSORY NUCLEI GROUP

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				ALSO IN CR BPI																					
COMMENT	BOTH AFFECTEDS		THE ONLY AFFEFECTED	BOTH AFFECTEDS		ONE OF THE AFFECTEDS		BOTH AFFECTEDS					ONE OF THE TWO	TWO OF THE THREE			ONE OF THE TWO AFFECTEDS	BOTH AFFECTEDS			ONE OF THE TWO AFFECTEDS		ONE OF THE TWO	ONE OF THE TWO	₹ 
EXON(RENAMED)	8 (8)		1 (3)	5 (7)				8 (10)	,				4 (6)			:	2 (4)			(44)	3 (11)				LIKE COMMON VARIANTS NOT INCLUDED HERE
AA CHANGE	Arg331->Thr		lle23->Thr	Glu202->Lys		SAME		SPLICING									NO CHANGE	SAME		c					ON VARIANTS I
NT CHANGE	AGA->ACT		ATT->ACT	GAA->AAA		SAME		14 BP INSERTION	21 BP 3' OF EX10	GAATGCCTGGTTAGAG		** * *********************************	24 BP 3' OF EX6	SAME	SAME		CTG->CTA	SAME		1 10 10 10 10 10 10 10 10 10 10 10 10 10	7	3 BP 5' OF 3' UTR	SAME	SAME	2, 3, 4 LOOK LIKE COMMO
PHENOTYPE	SCZ	SCZ	SCZ	SCZ	SCZ	SCZ		SCZ	SCZ				SCZ	SCZ	SCZ		SCZ	SCZ	SCZ	100	376		SCZ	SCZ	POLYMORPHISMS SEEN IN EXT1, 2,
SUBID	3010189	3010185	3010027	3110014	3110003	3010155		3010203	3010210				3011486	3210041	3210051		3010155	3210104	3210009	007.070	3210469		3210775	3011346	 RPHISMS S
PEDID	30124		30105	31102		30120		30126					30140	32301			30120	32200			32304		32312	30138	 POLYMO